

# HOYA NEW



**Oh There it is !**  
American Samoa, trees dripping with Hoyas



A pdf publication devoted to the Genus  
Hoya ISSN 2329-7336  
**Volume 2 Issue 4**  
July 2014

Editor:  
Dale Kloppenburg

## Contents

When a species is collected from the wild, I feel it is wise to identify it, propagate it and name it. In this way it will eventually get it into commercial channels, be distributed to all those interested in this genus and thus be preserved. If in the future the species is lost through natural causes or forest destruction it will still be here on earth in your collection.

**Corrections:** Vol. 2 – 2 May 2014, Katherine Challis at IPNI has pointed out that “stemma” is a singular neuter III so the endings on the two following *Eriostemma* species should be (corrected) as follows. *Eriostemma davaoense* Kloppenburg. *Eriostemma suluense* Kloppenburg.

The following new species are presented in PDF format with ISSN number.

1. ***Eriostemma guppyi*** Kloppenburg
2. ***Eriostemma smarense*** Kloppenburg
3. ***Hoya lagunaensis*** Kloppenburg
4. ***Hoya amoena* subsp. *bogorensis*** T. Green & Kloppenburg
5. ***Dischidia tonsuensis*** T. Green & Kloppenburg

**NOTE:** please see the Website publication of these species at “[www.rare-hoyas.com](http://www.rare-hoyas.com)”. Go to end and click on “publication” to access new species publications.

**Eriostemma guppyi** Kloppenburg  
ISSN 2329-7336

**Type description:**

**H. Guppyi**, Oliv. in Guppy, 'Solomon Islands,' p. 298 ex Hook. In Icones Plantarum 23 (1892) 2247, ramulis ultimis parce hirtellis deinde glabris foliis petiolatis coriaceis late ellipticis breviter acuminatis cuspidatisve basi late rotundatis subcordatisve supra glabris v. fere glabris subtus plus minus hirtellis 1-costatis nervis lateralibus primariis subtus utrinque 7-9, umbellis pedunculatis pedunculis pedicellisque glabris, calycis parvi corollae tubo 2-4-plo brevioris carnosuli 5-partiti lobis ovatis obtusis ciliolatis, corollae rotatae lobis patentibus ovatis v. late ovato-lanceolatis acutatis intus hirtellis extus glabris sinibus reflexis, coronae foliolis cartilagineo-incrassatis disco ovato-lanceolatis (sicco) concavis obtusis basi angustatis dorso profunde excavatis marginibus lateralibus utrinque carinatis, folliculis subteretibus longitudinaliter striatis parce hirtellis.

Hab. Solomon Islands, Fauro Island, Bougainville Straits, H. B. Guppy (No. 188).

Folia  $3\frac{1}{2}$ -4  $\frac{1}{2}$  poll. longa, 2  $\frac{1}{4}$  - 2  $\frac{1}{2}$  poll. lata; petiolus hirtellus  $\frac{1}{2}$  - 1 poll. longus. Umbella 10-14-Flora; pedunculus 2 poll. longis; pedicelli 1-1  $\frac{1}{2}$  poll. longi. Corolla 1-1  $\frac{1}{2}$  poll. diam. rubro-purpurea. Follicula 8-9 poll. longa.

Translation: ultimate branches moderately hairy thereafter becoming glabrous leaves petiolate leathery broadly elliptic briefly acuminate with sharp rigid point base rounded somewhat cordate above glabrous or nearly glabrous below more or less hairy leaf midrib with 7 to 9 lateral primary nerves prominent on the lower side, umbels pedunculate with peduncles and pedicels glabrous, calyx small 2 to 4 times smaller than the tube of the corolla fleshy 5 parted lobes ovate obtuse ciliate, lobes of the corolla rotate flat ovate or ovate lanceolate acute inside hairy outside glabrous sinus reflexed, leaflets of the corolla polished and cartilage-like disk ovate-lanceolate (when dry) concave obtuse base narrow back definitely hollowed out lateral margins on both sides keeled, follicles somewhat round longitudinally lined sparsely hirsute.

Leaves  $3\frac{1}{2}$  to 4  $\frac{1}{2}$  inches long, 2  $\frac{1}{4}$  to 2  $\frac{1}{2}$  inches wide; petioles hairy  $\frac{1}{2}$  to 1 inch long. Umbels 10 to 14 flowered; peduncles 2 inches long; pedicels 1 to 1  $\frac{1}{2}$  inches long. Corolla 1 to 1  $\frac{1}{2}$  inches in diameter red-purple. Follicles 8 to 10 inches long.

## **Eriostemma smarense** Kloppenburg

ISSN 2329-7336

*Eriostemma samarense* Kloppenburg sp. nova, Holotype 5914 PNH hic designatus. Similar to *Eriostemma madulidii* (Kloppenburg) Klopp. & Gilding 2001, differences are: the petioles here are shorter 1.5 cm vs. 2.3 cm, the sepals do not have ligules at the (dorsal) inside base, the corolla flattened is a little smaller 3.2 cm versus 3.8 cm also here the dorsal surface is densely hirsute almost villous compared to punctate and the ventral surface here is finely granulose versus puberulous, the columns are similar but here 0.60 cm long vs. 0.70 cm, the coronal scales are 0.05 cm shorter, the coronal column surface here is villous compared to a spongy surface. The pollinia are much shorter 0.78 mm vs. 1.00 mm.

This species was collected by Gaerlan, Sagcal & Fernando at Brag Samar, Philippines 5/2/92.

Photographic details follow:

Stems: 0.40 cm. in diameter, surface hirsute, nodes 0.5 cm in diameter, not much enlarged, internodes 6-8 cm. long, pubescent.

Leaf blade: elliptic-oblong –ovate, base obtuse apex acute, above & below hirsute nerves visible only below, pinnate nerves at 80°, margins recurved, midrib prominent below.

Petiole: 1.5 cm. x 0.2 cm. hirsute channeled above.

Peduncle: short 1 cm. long, hirsute.

Rachis: scared, bracteate.



Calyx side view enlarged about 8x. Pedicel strict, terete, hirsute surface. There were ca. 12 flowers not all opening at once. Calyx 0.43 cm x 0.40 cm. ovate, inside glabrous, concave, outside densely hirsute, glands present.



View of inside of the calyx enlarged about 8x. Ovaries glabrous broad domed, 0.35 cm. tall and the base pair 0.30 cm. wide.





Ventral surface of the corolla, this surface is densely hirsute almost villose. Lobes are reflexed. Inside collar hirsute.

|                |          |
|----------------|----------|
| Sinus – sinus  | 0.50 cm. |
| Sinus- apex    | 0.90 cm. |
| Sinus – center | 0.80 cm. |
| Apex – center  | 1.60 cm. |
| Widest         | 0.50 cm. |

Collar 0.30 cm tall and 0.90 cm. widest.

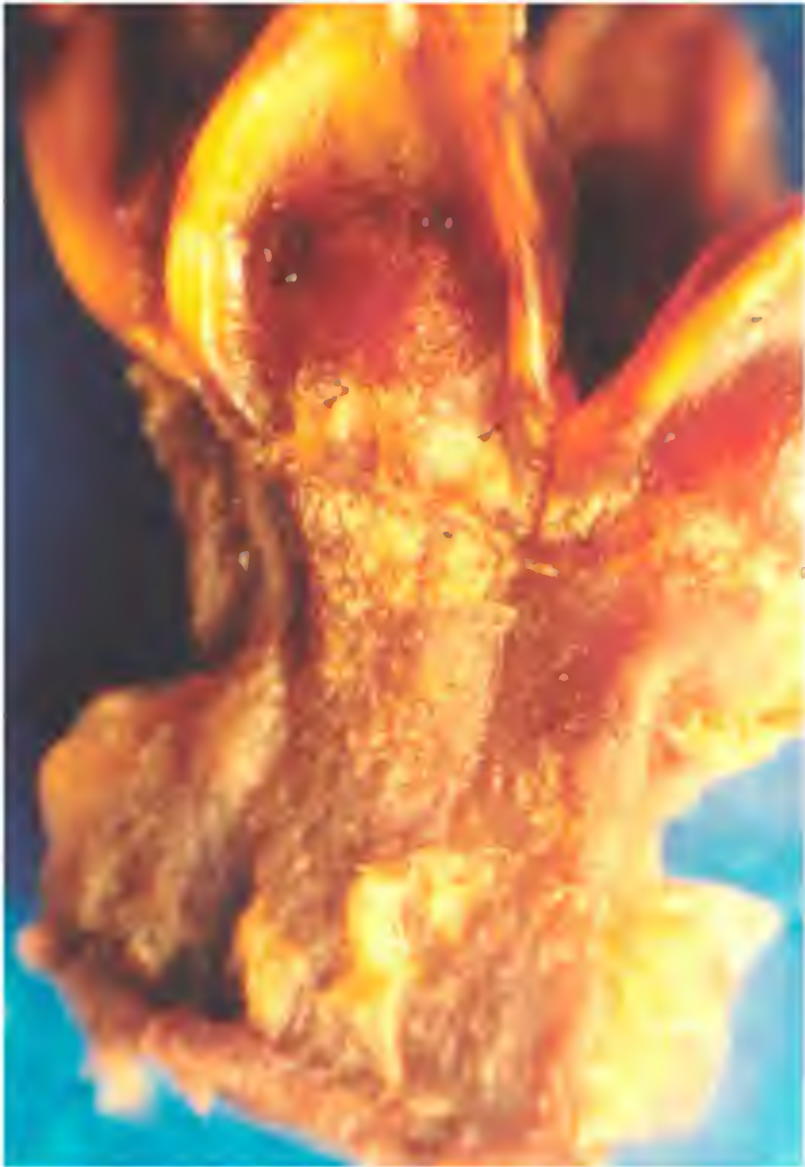


Corolla lobe inside enlarged about 6x. This surface is finely granulose, glabrous with the lobes reflexed, apex is acute, there is a groove near the thickened edge of the lobes. A few cilia on the edge.



Corolla and part of the corona enlarged about 8X. This inner surface of the corolla is glabrous and finely granulose except for the collar areas, which has stiff hirsute hair calls under the coronal area. As with all Eriostemma species the undersides (outside) is concave with raised edges.





Column and corona side view enlarged about 8x. Note the villose hair cells at the base of the corona lobe below that more matted hair cells. The column is 0.60 cm. tall base is 0.60 cm. in diameter and the narrowest area is 0.40 cm. in diameter.



Another column corona photo enlarged about 8x. Here the outer lobe is shown. Inner lobe is spatulate. Outer apex obtuse, brown color.

|               |          |
|---------------|----------|
| Apex – apex   | 0.40 cm. |
| Apex – center | 0.40 cm. |
| Widest        | 0.25 cm. |
| End height    | 0.46 cm. |
| AW. – aw      | 0.40 cm. |



Pollinarium enlarged about 48x. The retinaculum is small here with rounded head and extension apex. Translators are twisted twice. Here one can see the arms entering the retinaculum where they are attached to the central wall sides. The clear caudicles are clearly delineated on the supporting translators.



A greatly enlarged photo of the translator and caudicle connecting to the pollinium. There appears to be a ridge along the lower right side of the pollinium a possible rudimentary pellucid edge, a germinal mouth.

|                    |          |
|--------------------|----------|
| Pollinium length   | 0.78 mm  |
| widest             | 0.37 mm. |
| Retinaculum length | 0.58 mm. |
| head               | 0.49 mm. |
| Translator length  | 1.00 mm. |

Caudicles bulbous and clear.



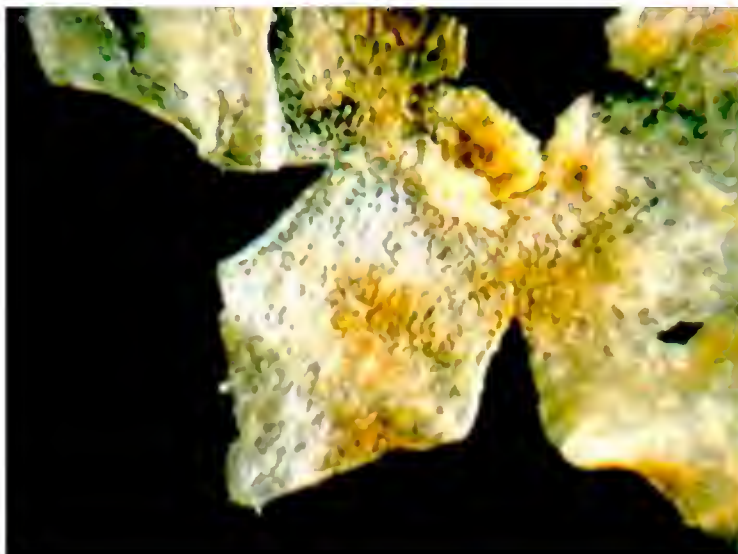
## Hoya lagunaensis Kloppenburg

ISSN 2329-7336

**Hoya lagunaensis** Kloppenburg sp. nova, holotypus 5965 (CAHUP) hic designatus. Not completely like any existing Philippine hoya species although similar in some respects to several named species as mentioned below. Worked up 7/7/06. This new hoya species is named for where it was collected “UP Landgrant” **Determination:** this is not *Hoya camphorifolia* Warburg as labeled. Coronal lobes are here long and outer apex acute. Also the coronal lobes here are horizontal not boat shaped. It appears close to *Hoya merrillii* Schlechter 1904 in corolla width and length and in the length of the corona lobes, however, the coronal lobes appear not to be raised outward and the leaves are not as wide; retinaculum ratio to pollinium length is way off 1: 2.5 here vs. 1:5.3. I thought it might be *H. macgregorii* Schlechter 1906 as the ends of the coronal lobes appear to be blunt but the flower is too large; the outer coronal lobes are not raised (they are horizontal).

It appears not to be *Hoya bicolensis* Klopp. & Siar although it is close in some respects but way off in Pollinarium and anther wing types.

Flower with no pedicel or calyx. Flower yellow.



Inside surface of the corolla enlarged about 8x.  
Outer surface glabrous, inside pubescent.

|                |         |
|----------------|---------|
| Sinus – sinus  | 0.24 cm |
| Sinus – center | 0.22 cm |
| Sinus – apex   | 0.42 cm |
| Apex – center  | 0.55 cm |
| Widest         | 0.34 cm |



Inside view of flower enlarged about 8x.  
Corona is horizontal. Inner lobe dentate outer lobe acute emarginate, glabrous.

|               |         |
|---------------|---------|
| Apex – apex   | 0.30 cm |
| Apex – center | 0.35 cm |
| Widest        | 0.10 cm |
| Ret. – ret.   | 0.08 cm |
| Ret. – center | 0.05 cm |
| Aw. - aw.     | 0.16 cm |
| Aw. – center  | 0.16 cm |

Anther wings protrude, dorsal scale concave with central longitudinal ridge.



Side view of a coronal scale enlarged about 16x. Anther wings are deeply scythe shaped. inner lobe short and dentate, dorsal horizontal, sides well rounded, outer apes emarginate.



Bottom view of 2 coronal scales, channeled to thickened central column. Anther wings are thick and protrude from sinus.



Pollinarium enlarged about 165x.

#### **Pollinium**

length 0.46 mm  
widest 0.18 mm

#### **Retinaculum**

length 0.14 mm  
shoulder 0.10 mm  
waist 0.05 mm  
hip 0.08 mm  
ext 0.06 mm

#### **Translator**

length 0.08 mm  
depth 0.03 mm

#### **Caudicle**

bulb diam. 0.05mm

**Ratio Ret.- Poll.:** 1:2.5





**Translator/caudicle type: d/o**

**Pollinia ends: R**

**Hoya lagunaensis** Kloppenburg CAHUP #5965  
Labeled incorrectly Hoya camphorifolia Warburg 1904





Measurements from Herbarium sheet:

**Foliage blade:** 7.00 – 9.27 cm long x 3.50 – 3.91 cm wide and elliptic base cuneate to somewhat obtuse, apex acute apiculate.

**Petiole:** 1.03 cm long

**Peduncle:** 2.23 cm - 2.47 cm long., nearly straight.

**Internodes:** 6.59 cm – 11.33 cm long with adventitious roots.

## **Hoya amoena subsp. bogorensis** T. Green & Kloppenburg ISSN 2329-7336

**Hoya amoena subsp. bogorensis** T. Green & Kloppenburg sp. nova, holotypus #759664 (BISH) hic designatus. This species was obtained by Ted Green from Kebun, Raya Indonesia (Bogor), Java, Indonesia. The leaves of this subspecies are similar to the species *Hoya verticillata* (Vahl) G. Don with occasional whorled and also having some compact nodes (thus groups of 4 leaves at one place). Nervation is also similar being alternate not opposite pinnate. The subspecies is however closest to the species *Hoya amoena* Bakhuizen 1950. Differences are minor, they include the calyx lobes here are larger 0.12 versus 0.10 cm and the corolla is here reflexed not horizontal, and larger in diameter 1.20 cm flattened versus 1.00 cm; the pollinia are shorter 0.52 mm vs. 0.60 mm in the species. Also the translators are much shorter

Detailed photos, comments and measurements follow:



**Pedicel:** curved, terete, glabrous and finely granulose, 1.5 cm long and 0.09 cm in diameter. Enlarged ca. 33x.

**Calyx:** below enlarged ca. 19x. Sepals are triangular, granulate outside, with ciliate edges 0.17 cm long and 0.13 cm at the widest and with a 0.04 cm basal overlap. Dorsal surface (inside) glabrous, no ligules present.



Dorsal surface of the calyx enlarged ca. 27x. The ovaries are dome shaped, 0.13 cm long and 0.10 cm wide at the base pair. Surface glabrous and somewhat granular, apices slightly modifies with small bulbous “kissing apices”.







**Corolla:** ventral surface enlarged ca. 18x. This surface is revolute, glabrous, granulate, center tapered inward ca. 0.04 cm wide/

|                |         |
|----------------|---------|
| Sinus – sinus  | 0.25 cm |
| Sinus – center | 0.21 cm |
| Sinus – apex   | 0.45 cm |
| Apex – center  | 0.60 cm |
| Widest         | 0.36 cm |



Corolla: dorsal surface enlarged as above is coarsely granulate, lobes are deeply cut, broadest in the middle, apices acute. Central area more glabrous and thinner.



**Corona:** ventral surface enlarged ca. 12.5 x. The surfaces are glabrous, lobes are channeled with rounded lobes and the surfaces are diagonally sulcate. Anther wing apices protrude slightly and are acute ended. Column oval 0.4 cm long and 0.11 x 0.09 cm opening, clean surface surrounding it.

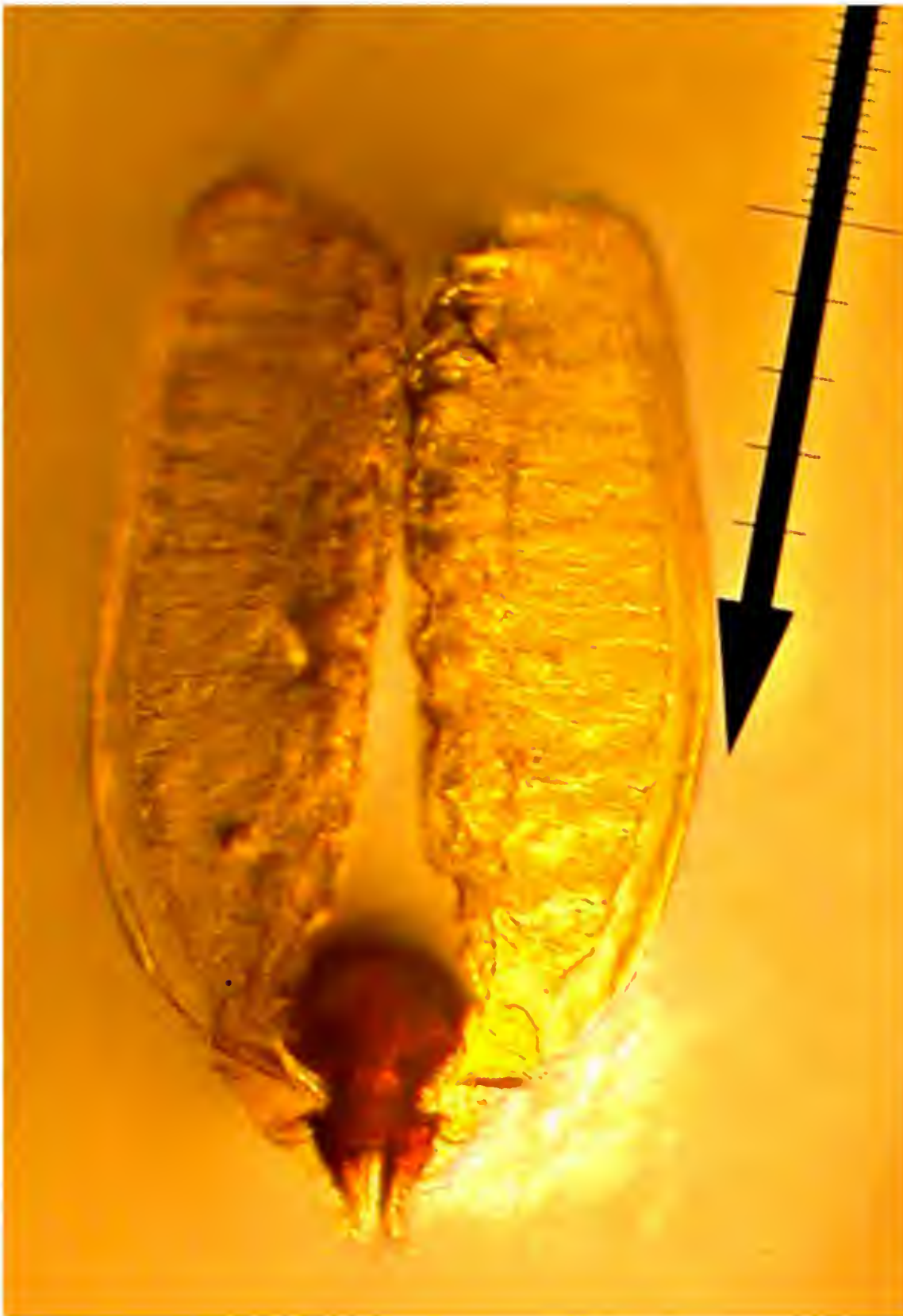


Corona: dorsal surface enlarged as above, it is horizontal glabrous, inner lobes do not reach the center and are dentate, dorsal shallowly concave with a wide central keel, edges are sharp, outer apex emarginate-acute.

|                      |                |
|----------------------|----------------|
| Apex – apex          | 0.32 cm        |
| Apex – center        | 0.34 cm        |
| Widest               | 0.16 cm        |
| Ret. – ret. / center | 0.09 / 0.08 cm |
| Aw. – aw. / center   | 0.18 / 0.17 cm |



Corona lobe: side view enlarged ca. 0.20x, left is outer lobe with an emarginate (rather cupped) apex. Top right the thin dentate inner lobe and below it the anther, anther wings center right are not deeply cupped.



Pollinarium enlarged ca. 150x.

**Pollinium**

length 0.52 mm  
widest 0.21 mm

**Retinaculum**

length 0.14 mm  
shoulder 0.20 mm  
waist 0.07 mm  
hip 0.11 mm  
ext. 0.05 mm

**Translator**

length 0.07 mm  
wide 0.04 mm

**Caudicle**

bulb diam. 0.05 mm

**Translator/caudicle type:**

p/o

**Pollinia end types: R**

**Leaves:** opposite, petiolate, glabrous, flat, elliptic, base tapered, apex tapered acute, 8.0 x 0.3 cm people curved 0.08 cm long and 0.03 cm in diameter, not grooved. Pinnate nervation semi obscure above, obscure ventrally ca 5 pairs, anastomosing and about 40° to the midrib. Leaves occasional on groups of 4 (tetraphylla),





Photos of the type plant taken by  
Ted Green at Kaaawa, Hawaii.





**NEW SPECIES OF DISCHIDIA (APOCYNACEAE – ASCLEPIADOIDEAE)  
FROM SULAWESI, INDONESIA  
DISCHIDIA TONSUENSIS, sp. n.**

T. Green\* and Kloppenburg\*\*

\*Green: Plant Research, P O Box 597, Kaaawa, Hawaii 96730

\*\* 6427 North Fruit Ave., Fresno, California 93711

ISSN 2329-7336

**ABSTRACT:** To add to the many described species of *Dischidia* from Indonesia, is this unique species that differs from all known species by its large, elliptic-emarginate leaves, white powder on its stems, peduncles and petioles - very indicative of its xerophytic ability- and tiny flowers - here described and named

**KEY WORDS:** *Dischidia*, *tonsuensis*, Sulawesi

***Dischidia tonsuensis*** T. Green & Kloppenburg sp. nova. Holotypus #759649 (BISH), here designated. A tropical, epiphytic, branching vine, with smooth, round stems covered with white powder; leaves smooth, elliptic with an obtuse base and emarginate tip, medium textured; nerves obscurely, palmate, 5; blade 4-6 cm long by 3.5-4.5 cm, glandless, light green with darker edge; petiole 0.2.5 cm x 0.7-1cm, fleshy; peduncle round, 0.3cm in diameter x 1.0cm - 2.5cm long, with branching tip, persistent, bearing a 1 to 8 flowered umbel, pedicel thread-like, 0.10 cm long and 0.07 cm in diameter. calyx of 5 sepals, 0.09 cm long and 0.09 cm at the widest; corolla urceolate 0.24-0.29 cm in diameter, top 5 lobed to a depth of 0.07 cm,; corona 5 lobed with anchor-shaped lobes, Ovaries 2. Seed pod not seen.

Ex hort garden of Ted Green; Kaaawa, Hawaii, original collection TG 94007, 20 Nov 1994, Tonsu Hill, west of Lake Poso, Sulawesi, Indonesia. Elevation about 1,800 ft.

A pendant vine with all of the stems and peduncles covered with a white, easily-dislodged powder. Very small cream to yellow flowers; 1 to 8 flowers in umbel; Milky sap, very sticky (possibly the stickiest in the genus)!

**Etymology:** After the place where it was found: Tonsu Hill, Poso District, Sulawesi, Indonesia.





General growth



Leaf shape and venation



Multiple headed rachis

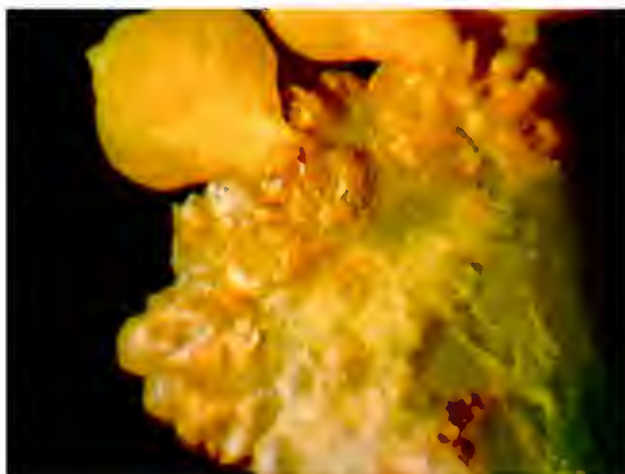


Open flowers and buds

#### Detailed measurements and photos:



**Peduncle section:** enlarged ca. 16x. it is slightly curved, terete, glabrous, 3.8 cm long and 0.17 cm in diameter at the base tapering outward to 0.58 cm in diameter at the rachis base.



**Rachis:** at peduncle ends with multiple (here 3) sub-circular protrusions. Here enlarged ca. 10x. The bracts that subtend are mostly ovate with apiculate apices 0.05-0.10 cm wide and outer



surface granulate also with a white powder in the crevices. Here one supports 3 urceolate flowers in various stages of maturity.



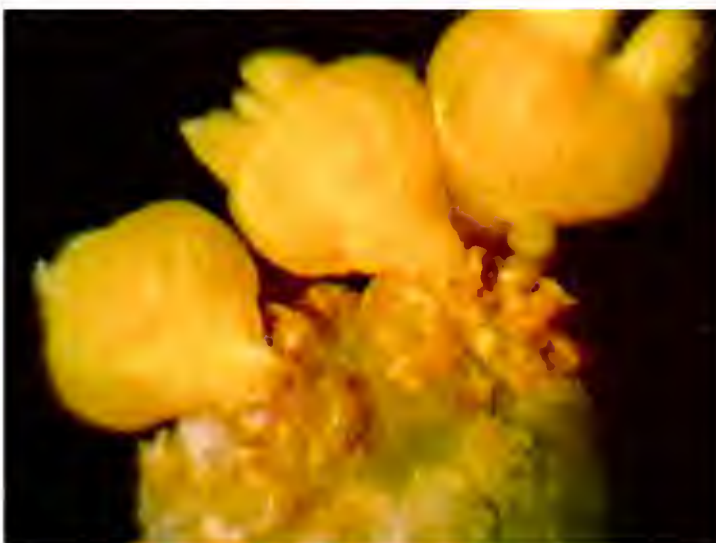
**Rachis:** enlarged as to the right above, visible are 3 rachis clusters with one at top with the 3 maturing flowers.



**Calyx:** ventral surface enlarged ca. 30x, sepals are sub-oval, granulate surfaced, 0.09 cm x 0.09 cm with a 0.04 cm basal overlap.



**Calyx:** dorsal (inside) surface enlarged as above, the surface is rough and the ovaries remained with the urceolate corolla.



**Flowers:** 2 from one rachis cluster (on the right) and one flower on the left rachis base. The flowers are urceolate, nearly round outer surface smooth glabrous, diameter 0.24-0.29 cm at the widest depending on maturity. Pedicels are 0.10 cm long and 0.07 cm in diameter, glabrous. Corolla lobes at first closed then opening somewhat at maturity.





**Corolla:** enlarged ca. 30x, the urceolate base is glabrous with circular striations visible due to internal surface structures. The lobes are somewhat diamond shaped with thickened central areas, the surfaces are microscopically finely granulate, the apices are variable, some sub-acute, others with inward pointing beaks.



Corolla: internal surface enlarged as above, the surface has linear lines curving from a indistinct lower ring upward to the edge of the thickened lobe bases.



Corolla lobe apices greatly enlarged to show the beaked inner ends. Not all lobes exhibit this character (variability within a species) Inside at the base there is also an occasional long stellate hair cell (one here at the base of right hand lobe). Lobes are 0.07 cm long 0.11 cm at the base and 0.02 cm at the thickest.



Corolla: here opened up to show the corona at its base. Enlarged ca. 25x, the corona is dome shaped, glabrous with 5 typical anchor shaped coronal lobes, the base is 0.015 cm wide and 0.03 cm long, head is 0.004 cm wide curved like an anchor and 0.07 cm long. The anthers are dome shaped and cover the center. Note the occasional long white stellate hair cells at the base of the corolla lobes. Dome is 0.19 cm at base and 0.12 cm tall.

Ret. – ret      0.04 cm  
Ret. – center   0.04 cm



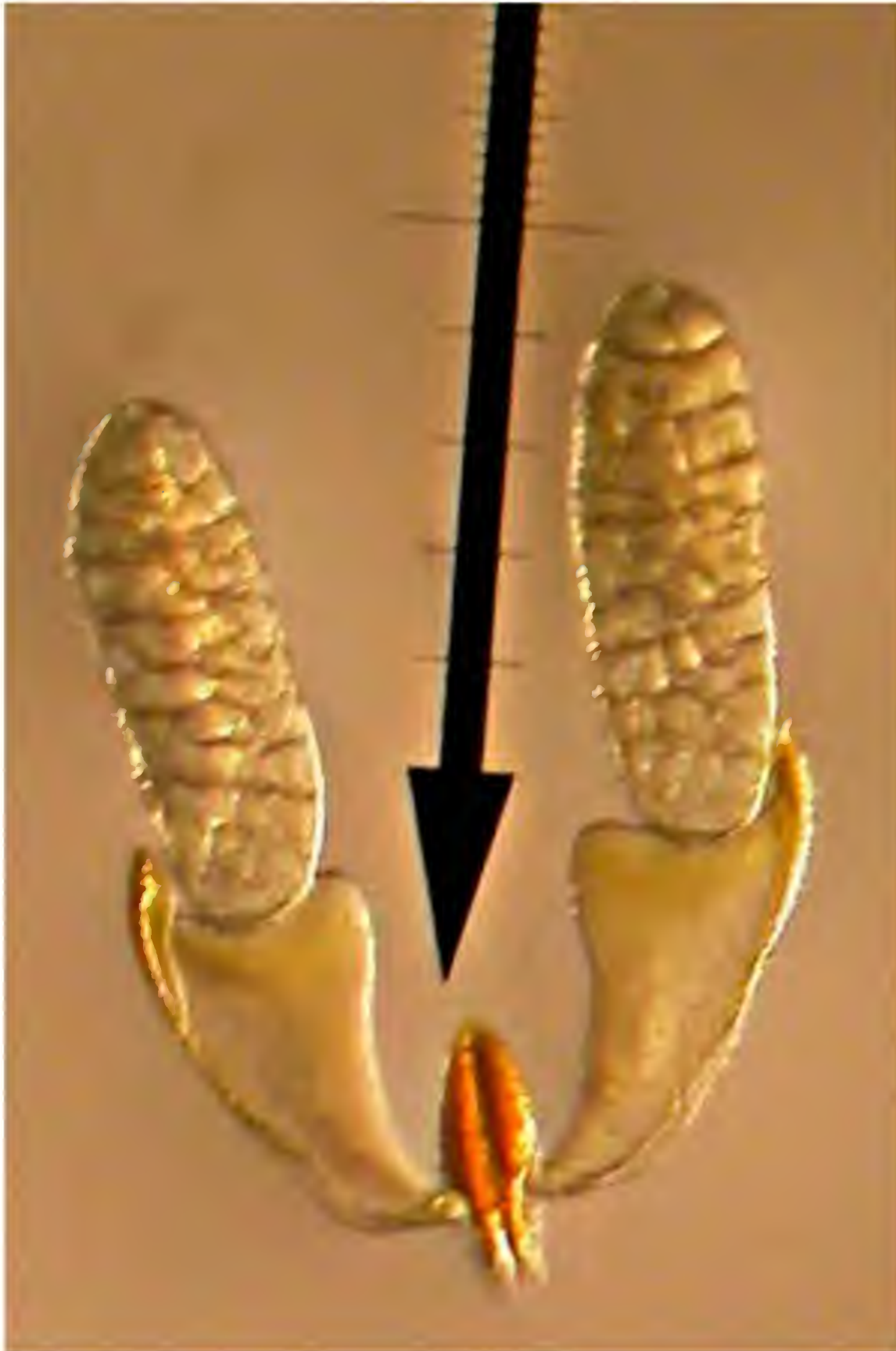
Coronal lobes greatly enlarged to show detail of the structure, Left at sloping base of the corona (anchor shape). Right still more enlarged, the structures vary somewhat from a single flower in the wing length and configuration, note the far right lobe twists and turns near its outer apical area.

Pollinarium enlarged 130x.



The pollinia have no pellucid edge as in the Genus *Hoya*, The translators appear to be fused with the caudicles. One does not support the other. The caudicle inner end is cup shaped supporting the pollinia. Caudicles/translators enter the retinaculum well down the sides near the leg areas.





Pollinarium here enlarged  
220X

**Pollinium**

|        |         |
|--------|---------|
| length | 0.25 mm |
| widest | 0.10 mm |

**Retinaculum**

|                |         |
|----------------|---------|
| length overall | 0.12 mm |
| widest         | 0.05 mm |
| ext.           | 0.04 mm |

**Caudicle**

|                |         |
|----------------|---------|
| top            | 0.13 mm |
| outside length | 0.22 mm |
| inside length  | 0.18 mm |